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demonstrate whether the foam has adequate strength to withstand a hydrostatic head equivalent to that which would be imposed if the vessel were submerged to its margin line.

(4) The effective buoyancy at the end of the submergence test must be used as the buoyancy credit; however, in no case will a credit greater than 55 lbs per cubic foot (881 kilograms per cubic meter) be allowed.

(5) The structure enclosing the foam must be strong enough to accommodate the buoyancy of the foam.

(6) Piping and cables must not pass through foamed spaces unless they are within piping and cable trunks accessible from both ends.

(7) Sample specimens must be prepared during installation and the density of the installed foam must be determined.

(8) Foam may be installed adjacent to fuel tanks if the boundary between the tank and space has double continuous fillet welds.

(9) MIL-P-21929B is incorporated by reference into this part.

(10) The results of all tests and calculations must be submitted to the OCMI.

(11) Blocked foam must—

(i) Be used in each area that may be exposed to water; and

(ii) Have a protective cover approved by the OCMI.

[CGD 79-023, 48 FR 51010, Nov. 4, 1983, as amended by CGD 83-005, 51 FR 923, Jan. 9, 1986]

Subpart H—Watertight Bulkhead Doors

§ 170.248 Applicability.

(a) Except as provided in paragraph (b) or paragraph (c) of this section, this subpart applies to vessels with watertight doors in bulkheads that have been made watertight to comply with the flooding or damage stability regulations in this subchapter

(b) A watertight door on a MODU must comply with § 174.100 of this subchapter.

(c) A watertight door on a self-propelled hopper dredge with a working

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freeboard must comply with § 174.335 of this subchapter.

[CGD 79-023, 48 FR 51010, Nov. 4, 1983, as amended by CGD 76-080, 54 FR 36977, Sept. 6, 1989]

§ 170.250 Types and classes.

(a) Watertight doors, except doors between cargo spaces, are classed as follows:

(1) Class 1—Hinged door.

(2) Class 2—Sliding door, operated by hand gear only.

(3) Class 3—Sliding door, operated by power and by hand gear.

(b) The following types of watertight doors are not permitted:

(1) A plate door secured only by bolts; and

(2) A door required to be closed by dropping or by the action of dropping weights.

(c) Whenever a door of a particular class is prescribed by these regulations, a door of a class bearing a higher number may be used.

§ 170.255 Class 1 doors; permissible locations.

(a) Except as provided in paragraphs (b) and (c) of this section, Class 1 doors within passenger, crew, and working spaces are permitted only above a deck, the molded line of which, at its lowest point at side, is at least 7 feet (2.14 meters) above the deepest load line.

(b) Class 1 doors are permitted within passenger, crew, and working spaces, wherever located, if—

(1) In the judgment of the OCMI, the door is in a location where it will be closed at all times except when actually in use; and

(2) The vessel is less than 150 gross tons and will not proceed more than 20 nautical miles (37 kilometers) from shore; or

(3) The vessel is in rivers or lakes, bays, and sounds service.

(c) Class 1 doors are permitted in any location on a vessel that—

(1) Is less than 100 gross tons; and

(2) Will operate only in the offshore oil industry trade.

(d) Quick-acting Class 1 doors are permitted in any location on a vessel that operates on the Great Lakes and

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is required to meet the damage stability standards of subpart H of part 172 of this chapter.

(e) For vessels required to meet the damage stability standards of subpart H of this chapter, when Class 1 doors are installed below a deck the molded line of which at its lowest point at side is less than 7 feet (2.14 meters) above the deepest load line, an indicator light for each door which warns when the door is open must be installed on the bridge.

[CGD 79-023, 48 FR 51010, Nov. 4, 1983, as amended by CGD 80-159, 51 FR 33059, Sept. 18, 1986]

§ 170.260 Class 2 doors; permissible locations.

(a) Except as provided in paragraphs (b) and (c) of this section, a Class 2 door is permitted only if—

(1) Its sill is above the deepest load line; and

(2) It is not a door described in § 170.265(d).

(b) If passenger spaces are located below the bulkhead deck, Class 2 doors with sills below the deepest load line may be used if—

(1) The number of watertight doors located below the deepest load line that are used intermittently during operation of the vessel does not exceed two, and;

(2) The doors provide access to or are within spaces containing machinery.

(c) If no passenger spaces are located below the bulkhead deck, Class 2 doors may be used if the number of watertight doors located below the deepest load line that are used intermittently during operation of the vessel does not exceed five.

(d) In determining whether Class 2 doors are allowed under paragraph (c) of this section, the watertight doors at the entrance to shaft tunnels need not be counted. If Class 2 doors are allowed under paragraph (c) of this section, the doors at the entrance to shaft tunnels may also be Class 2.

§ 170.265 Class 3 doors; required locations.

The following doors must always be Class 3:

(a) Doors in all locations not addressed in §§ 170.255 and 170.260.

(b) Doors between coal bunkers below the bulkhead deck that must be opened at sea.

(c) Doors into trunkways that pass through more than one main transverse watertight bulkhead if the door sills are less than 2.14 meters above the deepest load line.

(d) Doors below a deck, the molded line of which, at its lowest point at side, is less than 2.14 meters (7 feet) above the deepest load line if—

(1) The vessel is engaged on a short international voyage as defined in § 171.010 of this subchapter; and

(2) The vessel is required by § 171.065 of this subchapter to have a factor of subdivision of 0.5 or less.

[CGD 79-023, 48 FR 51010, Nov. 4, 1983, as amended by CGD 85-080, 61 FR 944, Jan. 10, 1996; CGD 96-041, 61 FR 50734, Sept. 27, 1996]

§ 170.270 Door design, operation, installation, and testing.

(a) Each Class 1 door must have a quick action closing device operative from both sides of the door.

(b) Each Class 1 door on a vessel in ocean service must be designed to withstand a head of water equivalent to the depth from the sill of the door to the margin line but in no case less than 10 feet (3.05 meters).

(c) Each Class 2 and Class 3 door must—

(1) Be designed, constructed, tested, and marked in accordance with ASTM F 1196 (incorporated by reference, see § 170.015);

(2) Have controls in accordance with ASTM F 1197 (incorporated by reference, see § 170.015); and

(3) If installed in a subdivision bulkhead, meet Supplemental Requirements Nos. S1 and S3 of ASTM F 1196 (incorporated by reference, see § 170.015), unless the watertight doors are built in accordance with plans previously approved by the Coast Guard, in which case, only Supplemental Requirements Nos. S1 and S3.1.4 of ASTM F 1196 (incorporated by reference, see § 170.015) must be met. In either case, control systems for watertight doors must have power supplies, power sources, installation tests and inspection, and additional remote operating consoles in accordance with Supplemental Requirements Nos. S1 through